09/613814

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                                                       ENTRY   SESSION
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FILE LAST UPDATED: 13 Mar 2002  (20020313/ED)

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and 1/23/02.  As of 1/23/02, the situation has been resolved.  Searches
and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry
Numbers with the P indicator executed between 12/27/01 and 1/23/02 may
be incomplete.  See the NEWS message on this topic for more information.

=> s elast? or stretch?
        257087 ELAST?
         99358 STRETCH?
L1      350872 ELAST? OR STRETCH?

=> s composit? (l) sheet?
       1088475 COMPOSIT?
       1139324 COMPN
        445290 COMPNS
       1388612 COMPN
                 (COMPN OR COMPNS)
       2058144 COMPOSIT?
                 (COMPOSIT? OR COMPN)
        288293 SHEET?
L2       54646 COMPOSIT? (L) SHEET?

=> s orthogon? or perpendic?
         20186 ORTHOGON?
         79453 PERPENDIC?
L3       99053 ORTHOGON? OR PERPENDIC?

=> s l1 and l2 and l3
L4          39 L1 AND L2 AND L3
```

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=> s inelast? or non-elast?
         56740 INELAST?
        524726 NON
            29 NONS
        524750 NON
                 (NON OR NONS)
        257087 ELAST?
           317 NON-ELAST?
                 (NON(W)ELAST?)
L5       57044 INELAST? OR NON-ELAST?

=> l4 and l5
L4 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l4 and l5
L6           4 L4 AND L5

=> d 1-4 bib,abs

L6   ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2002 ACS
AN   2002:169087  CAPLUS
TI   Elastically stretchable composite
     sheet and process for making the same
IN   Kobayashi, Toshio; Goda, Hiroki
PA   Uni-Charm Corporation, Japan
SO   Eur. Pat. Appl., 11 pp.
     CODEN: EPXXDW
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.       KIND  DATE           APPLICATION NO.  DATE
     ---------------  ----  --------       ---------------  --------
PI   EP 1184163        A2   20020306       EP 2001-307469   20010903
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     JP 2002069817     A2   20020308       JP 2000-266084   20000901
PRAI JP 2000-266084    A    20000901
AB   An elastically stretchable composite
     sheet includes an elastically stretchable
     first web and an inelastically stretchable second web
     of thermoplastic synthetic resin fiber which is intermittently bonded to
     the first web in a y-direction.  Component fiber of the second web has its
     cress-section cut in a direction orthogonal to the y-direction
     defined by a width w and a height h dimensioned to be at a ratio h/w less
     than 0.5.  The composite sheet having such a structure
     improve its flexibility.

L6   ANSWER 2 OF 4  CAPLUS  COPYRIGHT 2002 ACS
AN   2001:725381  CAPLUS
TI   Composite sheet and process for making the same
IN   Tange,  Satoru; Ohata,  Hiroyuki
PA   Japan
SO   U.S. Pat. Appl. Publ.
     CODEN: USXXCO
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.       KIND  DATE           APPLICATION NO.  DATE
     ---------------  ----  --------       ---------------  --------
PI   US 2001027074     A1   20011004       US 2001-821230   20010329
```

JP 2001288666	A2	20011019	JP 2000-99888	20000331

PRAI JP 2000-99888 A 20000331

AB This invention aims to provide a **composite sheet** having a layer of **inelastically stretchable** continuous fibers improved so that a possible unevenness in fiber diameter may be minimized. A **composite sheet** comprises an **elastically stretchable** layer and an **inelastically stretchable** layer formed with **inelastically stretchable** continuous fibers bonded to at least one surface of the **elastically stretchable** layer intermittently in one direction. The continuous fibers are oriented substantially in one direction thereof so that the **composite sheet** may present a ratio S1/S2 of 3.0 or higher where S1 represents a tensile strength in this one direction and S2 represents a tensile strength in the direction **orthogonal** to this one direction.

L6 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2002 ACS
AN 2001:546070 CAPLUS
DN 135:108599
TI **Elastically stretchable composite sheets** with high **stretchability** comprising laminates of a thermoplastic **stretchable elastic sheet** and a nonwoven **sheet** comprising fibers consisting of propylene polymers having **inelastic stretchability** and intermittently joined to one or two surfaces of the **elastic sheet**
IN Kobayashi, Toshio; Ohata, Hiroyuki
PA Japan
SO U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2001009715	A1	20010726	US 2001-766275	20010119
	JP 2001200460	A2	20010727	JP 2000-11994	20000120
	BR 2001000345	A	20011009	BR 2001-345	20010119
	CN 1307857	A	20010815	CN 2001-112332	20010120

PRAI JP 2000-11994 A 20000121

AB The **stretchable sheets** comprise laminates of an **elastic sheet** (A) having **stretchability** essentially in one or two directions **orthogonal** to each other and showing **stretch** in one direction .gtoreq.80%, and a **sheet**-like fibrous assembly (B) having an **inelastic stretchability** in one of the two directions and joined to .gtoreq.1 surface of A **sheet** at bonding sections arranged intermittently in the two directions and comprising component fibers each consisting of ethylene-propylene copolymer (I) contg. 0.5-10% ethylene units, butene-ethylene-propylene copolymer (II) contg. 0.5-10% ethylene units and 0.5-15% butene units, or a mixt. comprising 100-10% two polymers from I and II. The **composite sheets** are prepd. by the steps comprising the steps of (a) continuously feeding together A web comprising thermoplastic polymers and B web exhibiting breaking extension .gtoreq.150% in one direction and placing A web upon B web, (b) joining A web and B web intermittently in one direction and in the direction **orthogonal** to the first direction and essentially joining the webs in one direction, (c) **stretching** the webs at a **stretch** within the **elasticity** limit of A web and smaller than the breaking extension of B web, and (e) keeping the **composite** to cause contraction of the **composite**. The **composite sheets** are useful for disposable diapers, sanitary napkins, and

disposable medical gowns.

L6 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2002 ACS
AN 2001:50178 CAPLUS
DN 134:102013
TI **Elastically stretchable composite sheet**
IN Kobayashi, Toshio; Tange, Satoru; Yamaki, Koichi
PA Uni-Charm Corp., Japan
SO Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1069223	A1	20010117	EP 2000-305922	20000712
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CN 1283422	A	20010214	CN 2000-124261	20000712
	BR 2000009150	A	20011120	BR 2000-9150	20000712
PRAI	JP 1999-198159	A	19990712		
	JP 2000-168303	A	20000605		
	JP 2000-2000168303	A	20000605		

AB The sheet comprises an **elastic** sheet (polyester-polyether block copolymer) having a **stretchability** in 2 directions **orthogonal** to each other and a sheet-like fibrous assembly (polypropylene or polyester fibrous sheet) having an extensibility in the 2 directions bonded to .gtoreq.1 surface of the **elastic** sheet, wherein a fibrous assembly has an **inelastic** extensibility, the **elastic** sheet and the fibrous assembly are bonded together at bond regions arranged intermittently in the two directions and component fibers constituting the fibrous assembly are long fibers continuously extending and describing curves between each pair of adjacent bond regions in which the long fiber is bonded to the **elastic** sheet.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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(FILE 'HOME' ENTERED AT 08:25:01 ON 15 MAR 2002)

FILE 'STNGUIDE' ENTERED AT 08:25:15 ON 15 MAR 2002

FILE 'CAPLUS' ENTERED AT 08:30:45 ON 15 MAR 2002

```
L1      350872 S ELAST? OR STRETCH?
L2       54646 S COMPOSIT? (L) SHEET?
L3       99053 S ORTHOGON? OR PERPENDIC?
L4          39 S L1 AND L2 AND L3
L5       57044 S INELAST? OR NON-ELAST?
L6           4 S L4 AND L5
```

=> s orthogon?
L7 20186 ORTHOGON?

=> s l1 and l2 and l7
L8 8 L1 AND L2 AND L7

=> d 1-8 bib,abs

L8 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 2002:169087 CAPLUS

TI **Elastically stretchable composite sheet** and process for making the same
IN Kobayashi, Toshio; Goda, Hiroki
PA Uni-Charm Corporation, Japan
SO Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1184163	A2	20020306	EP 2001-307469	20010903
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002069817	A2	20020308	JP 2000-266084	20000901
PRAI	JP 2000-266084	A	20000901		

AB An **elastically stretchable composite sheet** includes an **elastically stretchable** first web and an inelastically **stretchable** second web of thermoplastic synthetic resin fiber which is intermittently bonded to the first web in a y-direction. Component fiber of the second web has its cress-section cut in a direction **orthogonal** to the y-direction defined by a width w and a height h dimensioned to be at a ratio h/w less than 0.5. The **composite sheet** having such a structure improve its flexibility.

L8 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 2001:725381 CAPLUS
TI **Composite sheet** and process for making the same
IN Tange, Satoru; Ohata, Hiroyuki
PA Japan
SO U.S. Pat. Appl. Publ.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2001027074	A1	20011004	US 2001-821230	20010329
	JP 2001288666	A2	20011019	JP 2000-99888	20000331
PRAI	JP 2000-99888	A	20000331		

AB This invention aims to provide a **composite sheet** having a layer of inelastically **stretchable** continuous fibers improved so that a possible unevenness in fiber diameter may be minimized. A **composite sheet** comprises an **elastically stretchable** layer and an inelastically **stretchable** layer formed with inelastically **stretchable** continuous fibers bonded to at least one surface of the **elastically stretchable** layer intermittently in one direction. The continuous fibers are oriented substantially in one direction thereof so that the **composite sheet** may present a ratio S1/S2 of 3.0 or higher where S1 represents a tensile strength in this one direction and S2 represents a tensile strength in the direction **orthogonal** to this one direction.

L8 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 2001:546070 CAPLUS
DN 135:108599
TI **Elastically stretchable composite sheets** with high **stretchability** comprising laminates of a thermoplastic **stretchable elastic sheet** and a nonwoven **sheet** comprising fibers consisting of propylene polymers having inelastic **stretchability** and intermittently

joined to one or two surfaces of the **elastic sheet**
IN Kobayashi, Toshio; Ohata, Hiroyuki
PA Japan
SO U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2001009715	A1	20010726	US 2001-766275	20010119
	JP 2001200460	A2	20010727	JP 2000-11994	20000120
	BR 2001000345	A	20011009	BR 2001-345	20010119
	CN 1307857	A	20010815	CN 2001-112332	20010120
PRAI	JP 2000-11994	A	20000121		

AB The **stretchable sheets** comprise laminates of an **elastic sheet** (A) having **stretchability** essentially in one or two directions **orthogonal** to each other and showing **stretch** in one direction .gtoreq.80%, and a **sheet**-like fibrous assembly (B) having an inelastic **stretchability** in one of the two directions and joined to .gtoreq.1 surface of A **sheet** at bonding sections arranged intermittently in the two directions and comprising component fibers each consisting of ethylene-propylene copolymer (I) contg. 0.5-10% ethylene units, butene-ethylene-propylene copolymer (II) contg. 0.5-10% ethylene units and 0.5-15% butene units, or a mixt. comprising 100-10% two polymers from I and II. The **composite sheets** are prepd. by the steps comprising the steps of (a) continuously feeding together A web comprising thermoplastic polymers and B web exhibiting breaking extension .gtoreq.150% in one direction and placing A web upon B web, (b) joining A web and B web intermittently in one direction and in the direction **orthogonal** to the first direction and essentially joining the webs in one direction, (c) **stretching** the webs at a **stretch** within the **elasticity** limit of A web and smaller than the breaking extension of B web, and (e) keeping the **composite** to cause contraction of the **composite**. The **composite sheets** are useful for disposable diapers, sanitary napkins, and disposable medical gowns.

L8 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 2001:50178 CAPLUS
DN 134:102013
TI **Elastically stretchable composite sheet**
IN Kobayashi, Toshio; Tange, Satoru; Yamaki, Koichi
PA Uni-Charm Corp., Japan
SO Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1069223	A1	20010117	EP 2000-305922	20000712
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CN 1283422	A	20010214	CN 2000-124261	20000712
	BR 2000009150	A	20011120	BR 2000-9150	20000712
PRAI	JP 1999-198159	A	19990712		
	JP 2000-168303	A	20000605		
	JP 2000-2000168303A		20000605		

AB The sheet comprises an **elastic** sheet (polyester-polyether block copolymer) having a **stretchability** in 2 directions

orthogonal to each other and a sheet-like fibrous assembly (polypropylene or polyester fibrous sheet) having an extensibility in the 2 directions bonded to .gtoreq.1 surface of the **elastic** sheet, wherein a fibrous assembly has an inelastic extensibility, the **elastic** sheet and the fibrous assembly are bonded together at bond regions arranged intermittently in the two directions and component fibers constituting the fibrous assembly are long fibers continuously extending and describing curves between each pair of adjacent bond regions in which the long fiber is bonded to the **elastic** sheet.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 1999:755337 CAPLUS
DN 132:294686
TI Anisotropy of torsional rigidity of **sheet** polymer **composite** materials
AU Startsev, O. V.; Kovalenko, A. A.; Nasonov, A. D.
CS Altai State University, Barnaul, Russia
SO Mech. Compos. Mater. (1999), 35(3), 201-212
CODEN: MCMAD7; ISSN: 0191-5665
PB Consultants Bureau
DT Journal
LA English
AB Wide application of polymer composite materials (PCM) in modern technol. calls for detailed evaluation of their stress-strain properties in a broad temp. range. To obtain such information, we use the dynamic mech. anal. and with the help of a reverse torsion pendulum measure the dynamic torsional rigidity of PCM bars of rectangular cross section in the temp. range up to 600 K. It is found that the temp. dependences of the dynamic rigidity of the calcd. values of dynamic shear moduli are governed by the percentage and properties of the binder and fibers, the layout of fibers, the phase interaction along interfaces, etc. The principles of dynamic mech. spectrometry are used to substantiate and analyze the parameters of anisotropy by which the behavior of a composite can be described in the temp. range including the transition of the binder from the glassy into a highly **elastic** state. For this purpose, the values of dynamic rigidity are measured under low-amplitude vibrations of the PCM specimens with a fiber orientation angle from 0 to 90.degree.. It is shown that for unidirectional composites the dependence between the dynamic rigidity and the fiber orientation angle is of extreme character. The value and position of the peak depend on the type of the binder and fibers and change with temp. It is found that the anisotropy degree of PCM is dictated by the mol. mobility and significantly changes in the temp. range of transition of the binder and reinforcement from the glassy into a highly **elastic** state (in the case of SVM fibers). The possibility of evaluating the anisotropy of composites with other reinforcement schemes, in particular, of **orthogonally** reinforced PCMs, is shown.

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 1999:457467 CAPLUS
DN 131:188585
TI **Elastic** and mechanical properties of carbon nanotubes
AU Goze, C.; Vaccarini, L.; Henrard, L.; Bernier, P.; Hernandez, E.; Rubio, A.
CS GDPC-CNRS, Univ. Montpellier 2, Fr.
SO Synth. Met. (1999), 103(1-3), 2500-2501
CODEN: SYMEDZ; ISSN: 0379-6779
PB Elsevier Science S.A.
DT Journal

LA English
AB We present a comparative study of energetic, structural and **elastic** properties of carbon and **composite** single-wall nanotubes using a non-**orthogonal** tight binding formalism. We investigate Young's Modulus and Poisson ratio of (n,0) and (n,n) nanotubes, with n=(5-20). Our calcns. predict that carbon nanotubes have a higher Young's Modulus (1TPa) than any of the studied **composite** nanotubes and of the same order as that found for graphene **sheets** without defect. We obtain good agreements with the available exptl. results.
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 1999:161361 CAPLUS
DN 130:203131
TI **Elastic** properties of single-wall nanotubes
AU Hernandez, E.; Goze, C.; Bernier, P.; Rubio, A.
CS Departamento Fisica Teorica, Universidad Valladolid, Valladolid, E-47011, Spain
SO Appl. Phys. A: Mater. Sci. Process. (1999), A68(3), 287-292
CODEN: APAMFC; ISSN: 0947-8396
PB Springer-Verlag
DT Journal
LA English
AB We report results of theor. studies on the **elastic** properties of single-wall nanotubes of the following **compns**.: C, BN, BC3, BC2N, and C3N4. These studies were carried out using a total-energy, non-**orthogonal**, tight-binding parametrization which is shown to provide results in good agreement both with calcns. using higher levels of theory and the available exptl. data. Our results predict that of all types of nanotubes considered, C nanotubes have the highest Young's modulus. We have considered tubes of different diams., ranging from 0.5-2 nm, and find that in the limit of large diams. the mech. properties of nanotubes approach those of the corresponding flat graphene-like **sheets**.
RE.CNT 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 1996:141253 CAPLUS
DN 124:208713
TI Residual **elastic** strain measurement in heat-treated SiC whisker/A2014 metal-matrix composites (MMC) by neutron diffraction
AU Ohnuki, Takahisa; Tomota, Yo; Ono, Masayoshi
CS Dep. Materials Science, Faculty Eng., Ibaraki University, Hitachi, Japan
SO Nippon Kinzoku Gakkaishi (1996), 60(1), 56-64
CODEN: NIKGAV; ISSN: 0021-4876
DT Journal
LA Japanese
AB The residual **elastic** strains in 22 vol.%SiC whisker/A2014 metal matrix **composites** made by squeeze-casting were examd. using a neutron crystal diffractometer with a one-dimensional position sensitive detector (PSD) and a neutron time-of-flight diffractometer with two-point detectors (TOF). The ingot of the sample was hot-extruded, then hot-swaged and finally hot-rolled to **sheets** of 2 mm in thickness. The hot-rolling was performed either parallel (specimen P) or vertical (specimen V) to the direction of extrusion. The whiskers are aligned with a little scattering against the extrusion direction in the specimen P, while their orientation distribution is nearly two-dimensionally random in specimen V. The residual stresses were introduced by rapid quenching from 448 K (T6 heat treatment) or 773 K (soln. treatment). SiC whisker and A2014 alloy were used as the ref.

materials. It is found that the residual **elastic** strains in the samples depend upon the orientation distribution of the whiskers. The ratio of residual **elastic** strains in the T6 treated specimen to those in the soln. treated one is about 3.0, which is consistent with the ratio of their temp. gaps upon quenching. The results by PSD and TOF are found almost identical. The residual **elastic** strains have been calcd. on the basis of Eshelby's equiv. inclusion and Mori-Tanaka's mean field theories. In the calcn., the 3-dimensional orientation distributions of whiskers obtained from the SEM observations on the two mutually **orthogonal** planes of the specimens were taken into consideration. The calcd. results were in good agreement with the measurements.

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     (FILE 'HOME' ENTERED AT 08:25:01 ON 15 MAR 2002)

     FILE 'STNGUIDE' ENTERED AT 08:25:15 ON 15 MAR 2002

     FILE 'CAPLUS' ENTERED AT 08:30:45 ON 15 MAR 2002
L1         350872 S ELAST? OR STRETCH?
L2          54646 S COMPOSIT? (L) SHEET?
L3          99053 S ORTHOGON? OR PERPENDIC?
L4             39 S L1 AND L2 AND L3
L5          57044 S INELAST? OR NON-ELAST?
L6              4 S L4 AND L5
L7          20186 S ORTHOGON?
L8              8 S L1 AND L2 AND L7

=> s l1 (l)recov?
        513048 RECOV?
L9        6314 L1 (L)RECOV?

=> s l9 and l2 and l7
L10            0 L9 AND L2 AND L7
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